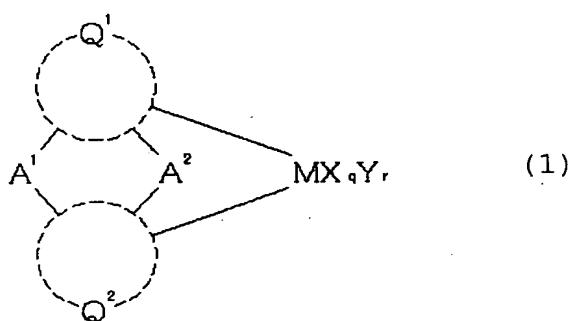


ABSTRACT

A transition metal compound useful as a component of a catalyst for olefin polymerization and a highly active 5 polymerization catalyst capable of producing a high molecular weight olefin polymer. The catalyst for olefin polymerization contains a transition metal compound represented by formula (1)



10 wherein M is a metal element of the groups 3 to 10 of the Periodic Table or a lanthanoid; X represents a ligand having a sigma bond for binding to M, and when X is plural, the Xs may be the same or different; Y represents a Lewis base, and when Y is plural, the Ys may be the same or different; A¹ and A² represent 15 crosslinking groups and at least one thereof has a boron or phosphorous atom as a crosslinking atom; q is an integer of 1 to 5 and equals [(the valance of M) - 2]; r is an integer of 0 to 3; and Q¹ and Q² have a specific structure, and Q¹ and Q² may be different or the same.